

What is claimed is:

1. In a process for the preparation of iodixanol by dimerization of 5-acetamido-N,N'-bis(2,3-dihydroxypropyl)-2,4,6-triiodo-isophthalamide ("Compound A") the  
5 improvement comprising precipitating unreacted Compound A, after the dimerization, from the reaction mixture and recovering the precipitated unreacted Compound A for re-use.
2. The process of claim 1 wherein the dimerization step is carried out using  
10 epichlorohydrin; 1,3-dichloro-2-hydroxypropane; or 1,3-dibromo-2-hydroxypropane as the dimerisation agent in a solvent selected from the group consisting of non-aqueous solvents, water, and mixtures of water and one or more alcohols.
- 15 3. The process of claim 2 wherein the dimerization agent is epichlorohydrin and the solvent is 2-methoxyethanol or methanol.
4. The process of claim 1 wherein precipitation of Compound A is effected with  
20 water, optionally together with an alcoholic co-solvent.

5. The process of claim 4 in which the pH of the mixture is adjusted to 10-11 with acid to provoke precipitation and the temperature is adjusted, if necessary, to 15-40°C.
- 5 6. The process of claim 5 in which further acid is added to adjust the pH of the mixture to 2-5.
7. The process of claim 1 wherein the Compound A recovered is recrystallised.
- 10 8. The process of claim 1 in which, after the precipitation of unreacted Compound A, the iodixanol is purified without the use of chromatographic methods.
9. The process of claim 1 wherein the recovered Compound A is re-used in a subsequent process for the preparation of iodixanol.